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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/069,692 | 06/07/2002 | Clifford Smith | PA-9943 | 3742 |

22840 7590 07/25/2003

AMERSHAM BIOSCIENCES
PATENT DEPARTMENT
800 CENTENNIAL AVENUE
PISCATAWAY, NJ 08855

EXAMINER

YOUNG, JOSEPHINE

| ART UNIT | PAPER NUMBER |
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1623

DATE MAILED: 07/25/2003

5

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/069,692

Applicant(s)

SMITH ET AL.

Examiner

Josephine Young

Art Unit

1623

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 February 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) _____ is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☒ Claim(s) 1-15 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

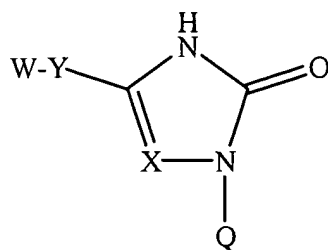
DETAILED ACTION***Election/Restrictions***

Restriction is required under 35 U.S.C. 121 and 372.

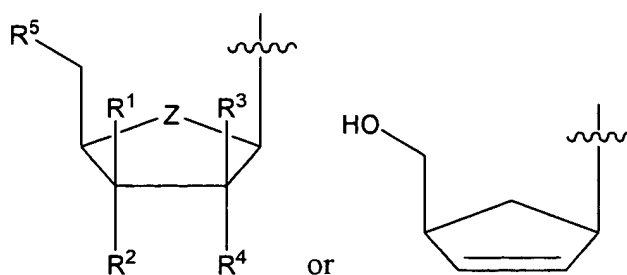
This application contains the following inventions or groups of inventions that are not so linked as to form a single general inventive concept under PCT Rule 13.1.

In accordance with 37 CFR 1.499, applicant is required, in reply to this action, to elect a single invention to which the claims must be restricted.

Group I, claim(s) 1-9, drawn to compounds having the structure:

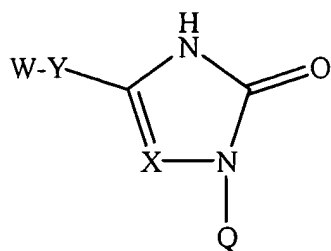


wherein Q is a sugar or sugar analog of the formula:

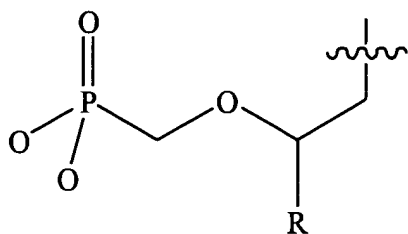


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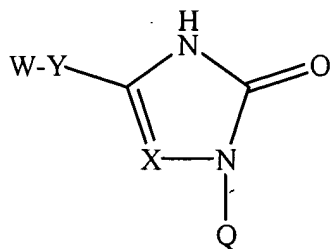
Group II, claim(s) 1-9, drawn to compounds having the structure:



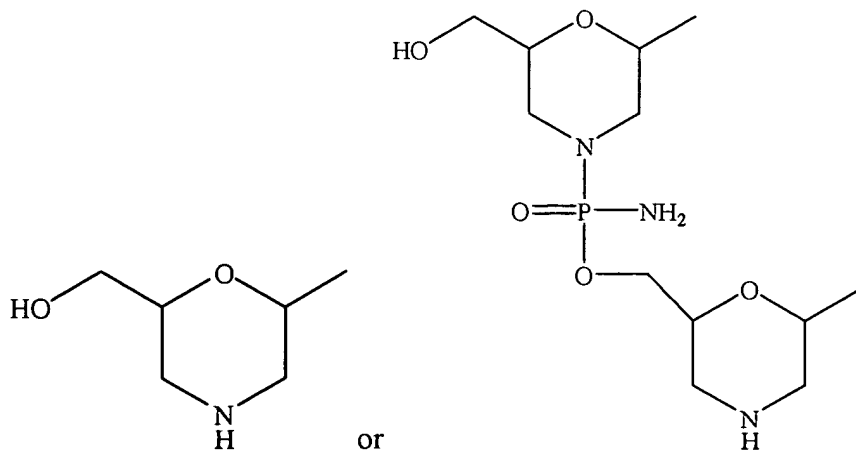
wherein Q is an acyclic sugar of the formula:



Group III, claim(s) 1-9, drawn to compounds having the structure:

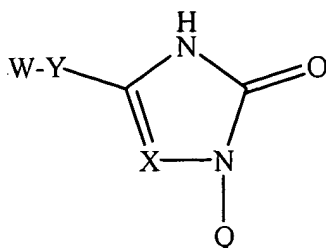


wherein Q is a morpholino residue of the formula:



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Group IV, claim(s) 1-9, drawn to compounds having the structure:



wherein Q is a sugar or a sugar analog or a nucleic acid backbone or backbone analog that is not the sugar or sugar analog of Group I, the acyclic sugar of Group II or the morpholino residue of Group III.

Group V, claim(s) 10-11, drawn to polynucleotide chains having a nucleoside analog of Group I.

Group VI, claim(s) 10-11, drawn to polynucleotide chains having a nucleoside analog of Group II.

Group VII, claim(s) 10-11, drawn to polynucleotide chains having a nucleoside analog of Group III.

Group VIII, claim(s) 10-11, drawn to polynucleotide chains having a nucleoside analog of Group IV.

Group IX, claim(s) 12-13, drawn to chain extension methods using the polynucleotide chain having a nucleoside analog of Group I.

Group X, claim(s) 12-13, drawn to chain extension methods using the polynucleotide chain having a nucleoside analog of Group II.

Group XI, claim(s) 12-13, drawn to chain extension methods using the polynucleotide chain having a nucleoside analog of Group III.

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Group XII, claim(s) 12-13, drawn to chain extension methods using the polynucleotide chain having a nucleoside analog of Group IV.

Group XIII, claim(s) 14-15, drawn to methods of detecting a nucleic acid having a nucleoside analog of Group I.

Group XIV, claim(s) 14-15, drawn to methods of detecting a nucleic acid having a nucleoside analog of Group II.

Group XV, claim(s) 14-15, drawn to methods of detecting a nucleic acid having a nucleoside analog of Group III.

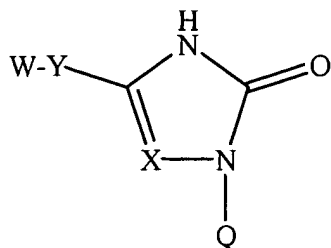
Group XVI, claim(s) 14-15, drawn to methods of detecting a nucleic acid having nucleoside analog of Group IV.

Claims 1-9 link Groups I-IV and will be examined together with the Group that is elected as it pertains to the elected invention. Claims 10-11 link Groups V-VIII and will be examined together with the Group that is elected as it pertains to the elected invention. Claims 12-13 link Groups IX-XII and will be examined with the Group that is elected as it pertains to the elected invention. Claims 14-15 link Groups XIII-XVI and will be examined together with the Group that is elected as it pertains to the elected invention.

The inventions listed as Groups I-XVI do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons.

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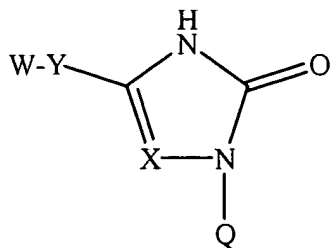
The technical feature linking claims 1-15 appears to be that they all relate to compounds of the general formula



However, FUKUDA (C1, 1449, mailed February 21, 2002) teaches that 1-(2-deoxy- β -D-ribofuranosyl)-2-oxo-4-imidazoline-4-carboxamide, i.e. a compound wherein Q is a 2-deoxy- β -D-ribofuranosyl, X is CH, Y is $-\text{CO}-$ and W is R_p , which is a reporter moiety that is a reactive group, namely, NH_2 , as set forth in claim 6. See Figure 1, Compound 1, page 1572. Therefore, by 1986, compounds of the general formula set forth above were known in the art.

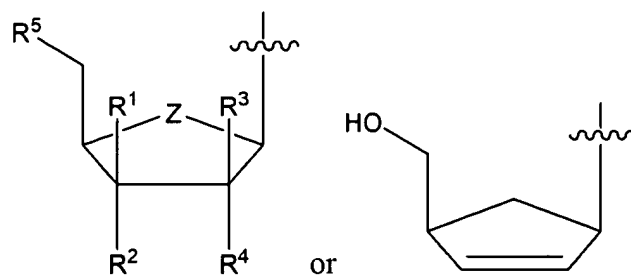
Thus, the technical feature linking the inventions of Groups I-XVI does not constitute a special technical feature as defined by PCT Rule 13.2, as it does not define a contribution over the prior art.

The special technical feature of Group I is considered to be compounds having the structure:

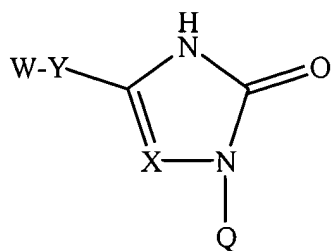


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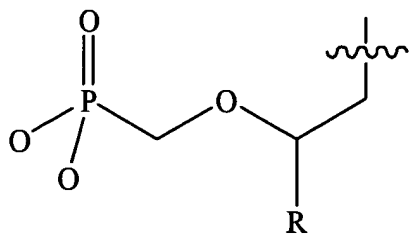
wherein Q is a sugar or sugar analog of the formula:



The special technical feature of Group II is considered to be compounds having the structure:

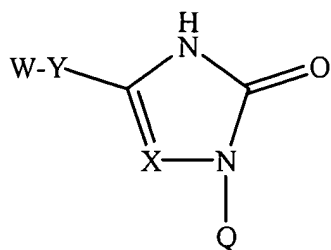


wherein Q is an acyclic sugar of the formula:

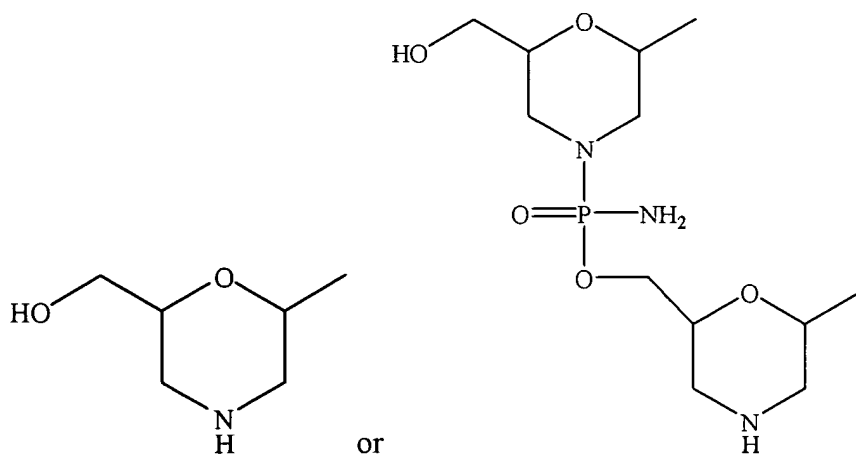


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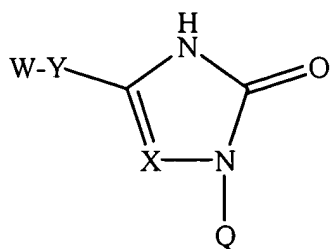
The special technical feature of Group III is considered to be compounds having the structure:



wherein Q is a morpholino residue of the formula:



The special technical feature of Group IV is considered to be compounds having the structure:



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wherein Q is a sugar or a sugar analog or a nucleic acid backbone or backbone analog that is not the sugar or sugar analog of Group I, the acyclic sugar of Group II or the morpholino residue of Group III.

The special technical feature of Group V is considered to be polynucleotide chains having a nucleoside analog of Group I.

The special technical feature of Group VI is considered to be polynucleotide chains having a nucleoside analog of Group II.

The special technical feature of Group VII is considered to be polynucleotide chains having a nucleoside analog of Group III.

The special technical feature of Group VIII is considered to be polynucleotide chains having a nucleoside analog of Group IV.

The special technical feature of Group IX is considered to be chain extension methods using the polynucleotide chain having a nucleoside analog of Group I.

The special technical feature of Group X is considered to be chain extension methods using the polynucleotide chain having a nucleoside analog of Group II.

The special technical feature of Group XI is considered to be chain extension methods using the polynucleotide chain having a nucleoside analog of Group III.

The special technical feature of Group XII is considered to be chain extension methods using the polynucleotide chain having a nucleoside analog of Group IV.

The special technical feature of Group XIII is considered to be methods of detecting a nucleic acid having a nucleoside analog of Group I.

The special technical feature of Group XIV is considered to be methods of detecting a nucleic acid having a nucleoside analog of Group II.

The special technical feature of Group XV is considered to be methods of detecting a nucleic acid having a nucleoside analog of Group III.

The special technical feature of Group XVI is considered to be methods of detecting a nucleic acid having nucleoside analog of Group IV.

Accordingly, Groups I-XVI are not so linked by the same or corresponding special technical feature as to form a single general inventive concept.

Applicant is advised that the reply to this requirement to be complete must include an election of the invention to be examined even though the requirement be traversed (37 CFR 1.143).

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

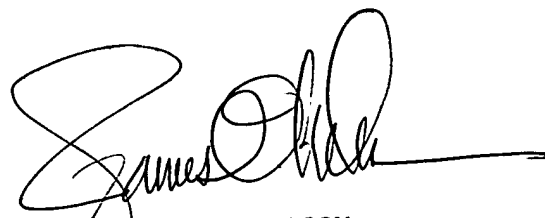
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Josephine Young whose telephone number is (703) 605-1201. The examiner can normally be reached on Monday through Friday, 9:00 a.m. to 6:00 p.m.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James O. Wilson can be reached on (703) 308-4624. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 305-3014 for regular communications and (703) 872-9307 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1235.

JY
July 22, 2003



JAMES O. WILSON
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1600